

Appl. No. 10/086,554
Amendment dated June 21, 2004
Reply to Office Action of April 5, 2004

REMARKS/ARGUMENTS

Claims 1 and 6-7 remain pending in the application. There are now one independent claim and three total claims pending in the application.

Applicants and their undersigned attorney have carefully reviewed the Office Action mailed April 5, 2004, in the above-identified patent application, together with the prior art references relied on by the Examiner in the rejections of the claims. In response, claims 3-5 have been incorporated into claim 1 to emphasize the patentable aspects of the invention. The subject matter of claim 2 was incorporated into claim 1 by the Amendment filed on November 5, 2003. Claim 6 has been amended to correct a typographical error and to change the dependency of claim 6 from claim 5 to claim 1. Claims 8-35 have been canceled. As claim 5 and all intervening claims have been incorporated into original base claim 1, and because claim 6 originally depended from claim 5, and claim 7 still depends from claim 6, as in the application as filed, the current amendments do not change the scope of any claims now pending in the application, and, therefore, no new search is believed necessary as a result of the current amendments.

In the Office Action mailed April 5, 2004, claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Land (US5932073) in view of Salmon (US5348623), and claims 3-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Land in view of Salmon and further in view of Harkey, Sr. (US5059287).

Applicant would like to thank the Examiner for the detailed Office Action that set forth with specificity the Examiner's reasons for rejecting the claims. However, at page

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3, first full paragraph of the Office Action, it becomes apparent that applicant has failed to fully direct the Examiner's attention to the patent-worthy advantages and unexpected results that arise from incorporating the dual-container configuration of the boiler vessel into the distillation system of the claimed invention.

The dual-container boiler vessel has a unique structure, which provides a number of advantages over the prior art. First, a major problem with point-of-use (POU) distillation systems is the build-up of sediments and scale inside the boiler vessel. The prior art of record discusses this problem and usually makes provisions for cleaning the boiler vessel (see, e.g., Turner (US4957200) at column 7, lines 53, *et seq.*). However, (as set forth in the specification of the present application at page 22, paragraph 61) the design of the present invention makes the inner container of the boiler vessel essentially a line-replaceable unit that may be quickly and simply removed and replaced during routine scheduled maintenance visits. This significantly reduces the labor costs for maintenance, since it is not necessary to attempt to clean the vessel on-site, while also reducing downtime for the distillation unit. None of the prior art systems provide for such a simple and efficient maintenance process. Thus, applicant has invented a way to make the inner container of the boiler vessel easily replaceable, while also designing a dual-container vessel that has other significant advantages over the prior art.

For example, another requirement for POU distillers of this type is space limitation. The unit must fit within the footprint and be the approximate size of competing units, while also providing as many features as possible and maintaining a

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high production level of purified water. Thus, space limitations and the efficient use of space are important, as is the elimination of downtime. The dual-container vessel of the present invention has more efficient heat transfer from water in the inner container to the water in outer container because not only is heat transferred through the sidewalls of the inner container, but heat is also transferred through the relatively large circular floor of the container. This creates a more efficient pre-heating of the water in the outer container to produce the venting of volatile organic compounds (VOC's) out through the VOC ports 200 formed in the wall of the outer container.

In addition, because the dual-container vessel of the invention includes a large bottom surface area, the present invention can boil water at a more shallow water level using a gentle boiling of the water in the inner container so that fewer particulates are carried into the condenser with the water vapor. Furthermore, the dual-container vessel of the invention includes a drain outlet port 202, as recited in claim 7, located at the bottom of the outer container. The outlet port is in line with the inlet port 192 of the inner container, as illustrated in FIG. 5 of the drawings. The boiling of the water in the inner container creates a vibration that causes particulate matter and precipitates to exit the inner container and pass down the outlet port into the outlet tube, thereby removing the particulate matter from the boiler vessel completely, reducing the amount of build-up inside the vessel, and, thus, reducing the frequency of scheduled maintenance.

The Examiner asserts at page 3, first full paragraph of the Office Action, that, because the specification also discloses a non-dual container embodiment of the vessel,

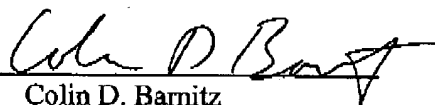
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this makes the claimed dual-container vessel obvious and is evidence of non-criticality in the art. This argument is akin to saying that if a patent application were to be filed for a chair having a patentable cushion and separately patentable armrests, and if the specification states that a conventional cushion may be used with the chair having patentable armrests, then an embodiment of the chair with the patentable cushion must be obvious because it can be replaced with a conventional cushion in another embodiment. This not the law. The dual-container boiler vessel structure claimed as part of the water distillation system of the invention set forth in claim 1 provides a number of non-obvious functional and competitive advantages over the prior art, as set forth above. Accordingly, claim 1 is believed to be allowable. Claims 6-7 are also believed to be allowable for the reasons set forth above, and because they depend from an allowable base claim.

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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